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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,321	02/06/2004	Stephen J. Harrison	2001-023-03US	6487
7590 09/08/2005			EXAMINER	
Stephen J. Scribner PARTEQ Innovations, Room 1625 Biosciences Complex Queen's University at Kingston Kingston, ON K7L 3N6 CANADA			BASICHAS, ALFRED	
			ART UNIT	PAPER NUMBER
			3749	
DATE MAILED: 09/08/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/772,321

Applicant(s)

HARRISON ET AL.

Examiner

Alfred Basichas

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 July 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/8/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 8-16, 18, 21-27, 29, and 32-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Arendt (4,422,443), which discloses all of the claimed limitations. Arendt shows a solar collector including, among other things, glazing 44-47, an inlet 24 and outlet 26, a damper 98 opened and closed depending on a temperature (see at least col. 9, lines 15-34) that is below a stagnation temperature (see at least col. 2, lines 4-9) of the solar collector. Arendt further shows the inlet and outlet at least partially in the bottom portion of the collector and a high emissivity surface as is inherent to most, if not all, solar collectors. In addition, Arendt shows the solar collector utilized with a hot water system with heat transfer for utilization of the energy collected (see at least col. 5, line 49 – col. 6, line 17).

***Claim Rejections - 35 USC § 102/103***

3. Claims 1-38 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Morse (246,626), Niedermeyer (4,226,225), Cameron (4,469,087), Lorenz (4,237,865), and/or Palmer (4,219,009) as applied in applicant's international application no. PCT/CA2004/000162.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 4, 17, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arendt (4,422,443), which discloses substantially all of the claimed limitations except for the outlet being elevated relative to the inlet. The claimed relative arrangement is an obvious modification based on design choice, and depends on the location of the apparatus, such as on a slant roof of a house. In view of the absence of criticality for this particular design, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate it into the invention disclosed by Arendt, so as to provide for the desired location of the apparatus.

8. Claims 6, 19, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arendt (4,422,443), which discloses substantially all of the claimed limitations except for the high emissivity surface being made by use of a high emissivity coating. While the reference may be silent as to how the apparatus is manufactured, the prior art apparatus appears to be the same as claimed. This product-by-process limitation would not be expected to impart distinctive structural characteristics to the apparatus.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized any process including that which is recited in the claims to have produced the high emissivity surface. *Note: Applicant may overcome this rejection by providing evidence that the claimed product-by-process limitation imparts a distinctive structural characteristic to the claimed invention, but a statement or argument*

*by Applicant will not be deemed factual evidence. Of course, even if evidence were provided to overcome anticipation, one would still need to assess whether it would have been a prima facie obvious method.*

9. Claims 7, 20, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arendt (4,422,443), which discloses substantially all of the claimed limitations except for the specific emissivity of 0.5. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have incorporated the claimed emissivity into the invention disclosed by Arendt, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable values involves only routine skill in the art. *In re Aller*, 105 USPQ 233; *In re Swain*, 156 F.2d 239.

#### ***Prior Art***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. These references disclose solar collectors with many, if not all, of the claimed components. Nevertheless, in order to avoid overburdening the applicant with redundant rejections, these references were not applied.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alfred Basichas whose telephone number is 571 272


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4871. The examiner can normally be reached on Monday through Friday during regular business hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus can be reached on 571 272 4877. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872 9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Tech Center telephone number is 571 272 3700.

August 29, 2005

  
Alfred Basicas  
Primary Examiner